NASEO-ACEEE Webinar on the Clean Power Plan – Tools for States

June 29, 2015
2:00 PM (ET)

NASEO-ACEEE
Webinar on the Clean Power Plan – Tools for States

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NASEO-ACEEE
Webinar on the Clean Power Plan – Tools for States

- **Karen Palmer**, Resources for the Future

  A Primer on Comprehensive Policy Options for States to Comply with the Clean Power Plan
- **Ken Colburn**, Regulatory Assistance Project

  Implementing EPA's Clean Power Plan (prepared for NACAA)
- **Rachel Wilson**, Synapse Energy Economics

  Best Practices in Planning for Clean Power Plan Compliance: A Guide for Consumer Advocates (prepared for NASUCA)
- **Sara Hayes**, ACEEE

  SUPR calculator and energy efficiency compliance template series
- **Rodney Sobin**, NASEO

  NASEO update: case studies, plan language, engagement, web resource

Comprehensive Policy Options for States to Comply with the Clean Power Plan

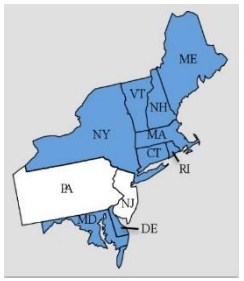
Karen Palmer
Resources for the Future

Clean Power Plans: Tools for States
NASEO/ACEEE Webinar
June 29, 2015

RESOURCES
FOR THE FUTURE

State Federal Partnership in the Clean Power Plan

- **EPA sets state-level emission rate goals**
- **Policy is implemented by the States**
- **Multiple pathways and flexibility for States**
  - Example: rate-based, mass-based or technology policies
  - State plans must show equivalence to BSER
- **States encouraged to work together**



RFF

Primer on Flexible Comprehensive Policy Options

- Flexible policies: set goal and allow trading/averaging
  - resilient to changes in fuel prices, technology and other factors
  - thus cost effective
  - can be tailored to match state needs
- Comprehensive policies
  - Can achieve the climate policy goal by themselves
  - Can be self correcting
- Three types of policies considered in our primer
  - Rate based policy
  - Mass based policy
  - Clean energy standard (CES)
- Evaluate for
  - Cost effectiveness and administrative burden
  - Distributional consequences
  - Other environmental outcomes

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First Choice for States: Form of State Goal

- EPA specifies CO_2 emission rate goal (lb/MWh) for each state, but states can convert to mass (tons)
  - EPA has offered some guidance; expect more to come
- What's the difference?
  - Mass-based goals have environmental certainty but don't adjust if demand growth is higher
  - Rate-based goals have higher environmental benefits under slow growth and less cost under high growth
  - Comparison in fact (instead of conceptual) depend on EPA's approach to converting from rate to mass
- Form of regulation is independent of form of goal
  - Could combine rate goal with mass policy
    - Maybe in CA where broader mass policy exists and rate goal may have advantages
  - Keeping them the same would be simpler; lower admin costs

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Second Choice for States: Form of Policy

- Comprehensive (self adjusting) versus portfolio (technology focused)
  - Focus on comprehensive
  - States may combine portfolio components (RPS, EERS) with comprehensive
- Treatment of new natural gas generators
- Important considerations for policy form
  - Clean energy standards (CES) target generation shares not emissions much like an RPS
    - May not be self correcting
  - Rate-based policies embed generation subsidy
    - Single approach to distributing value associated with emissions rate restriction
    - Also subsidy to energy efficiency / conservation depending on implementation
  - Mass-based policies have more options for distributing value
    - Distribution of emissions value matters for outcomes
    - Mass based policies are simpler to administer

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Rate-based policy includes production incentive

Two instruments in one!:

1. Opportunity Cost

2. Output Subsidy

	Emissions Rate	Performance Standard	Compliance Status (Before Trading)
Plant A	1880 lbs/MWh	1980 lbs/MWh	In compliance. Excess credit of 100lbs/MWh for each MWh generated.
Plant B	2080 lbs/MWh	1980 lbs/MWh	Out of compliance. Need credit of 100lbs/MWh for each MWh generated.

Credits

$

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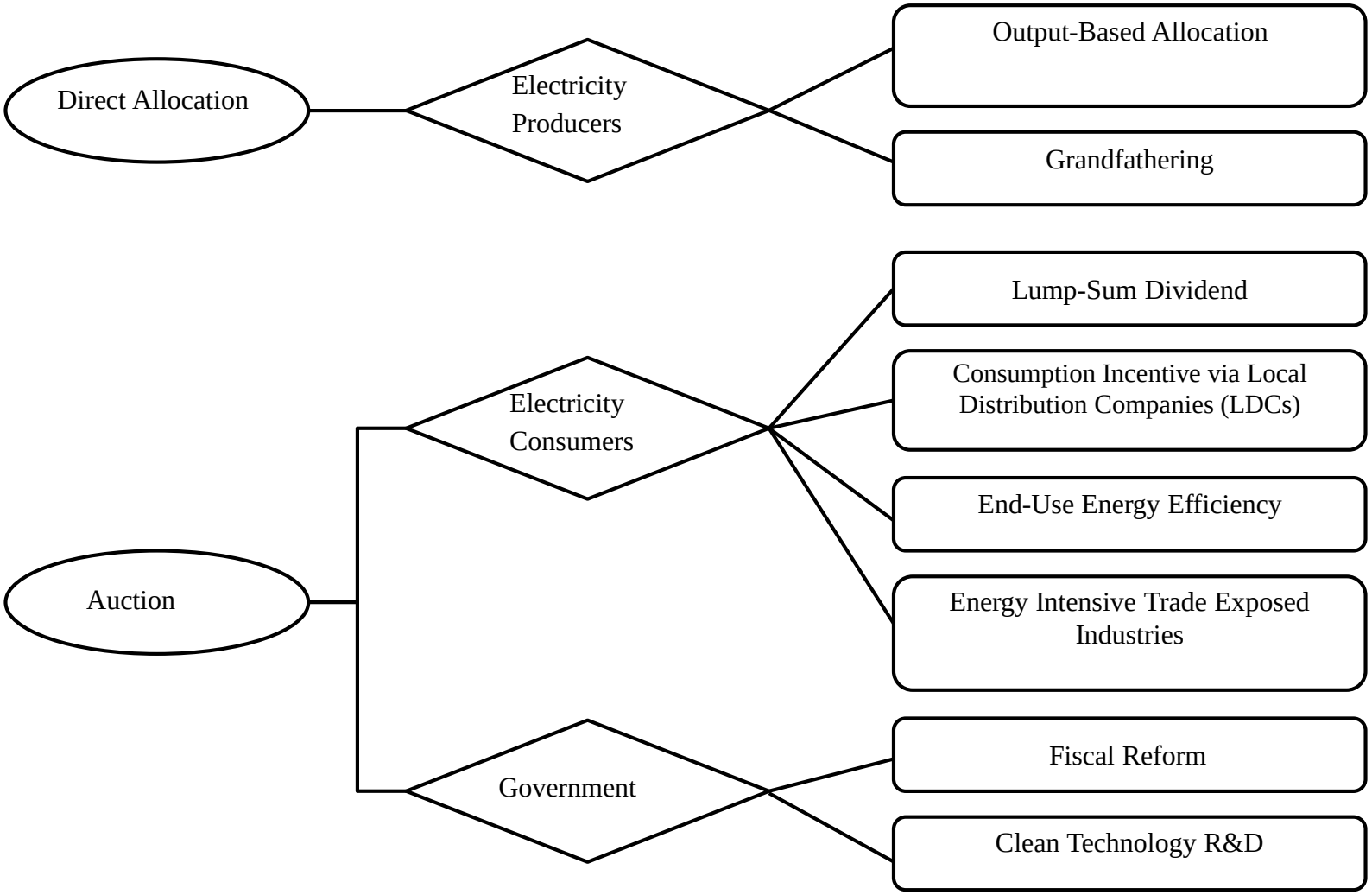
Emissions Value Allocation under Mass-Based Policy



Emissions Reducing Incentives under *Selected* Policy Types

policy	Coal plant upgrades	Redispatch within fuel	Coal to gas re-dispatch	More renewables /non-emit	Energy conservation/ efficiency
Tech – based CES			x	x	
Tradable rate-based	x	x	x	x	
Mass-based LDCs	x	x	x	x	
Mass-based auction	x	x	x	x	x

The more opportunities for emissions reductions encouraged by a policy, the more cost effective it is.

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Beyond cost-effectiveness

- Incidence: Rate-based approach or output-based allocation under a mass-based policy may have electricity price-reducing benefits that appeal
- Inter-regional leakage: Allocation of allowances can be used to address economic and emissions leakage concerns under mass-based policy when neighbors take a different approach.
- Other environmental outcomes: Policies that encourage clean generation may make room for coal and lead to higher emissions of SO_2 relative to broader rate-based approach.

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Conclusions

- States have many options for complying with the CPP
- Economic efficiency and distributional consequences of policy options depend on
  - how allowance value is allocated
  - the scope of the policy including treatment of new Natural Gas.
- Impact of rate versus mass *goal* choice on states may depend on rate to mass conversion approach.
- Allowing flexibility and providing incentives for as many cost-effective approaches to CO_2 emissions reduction as possible enhances policy cost-effectiveness.

RFF

To learn more

1. Check out numerous blog posts on the RFF blog (common-resources.org).

2. Read “A Primer on Comprehensive Policies for States to Comply with the Clean Power Plant” at www.rff.org.

3. Stay tuned to RFF’s website for more insights and commentary about the final CPP rule.

Implementing EPA's Clean Power Plan: A Menu of Options

National Association of Clean Air Agencies (NACAA)

"Clean Power Plan – Tools for States"
NASEO-ACEEE Webinar
June 29, 2015

Presented by Ken Colburn, Principal

The Regulatory Assistance Project
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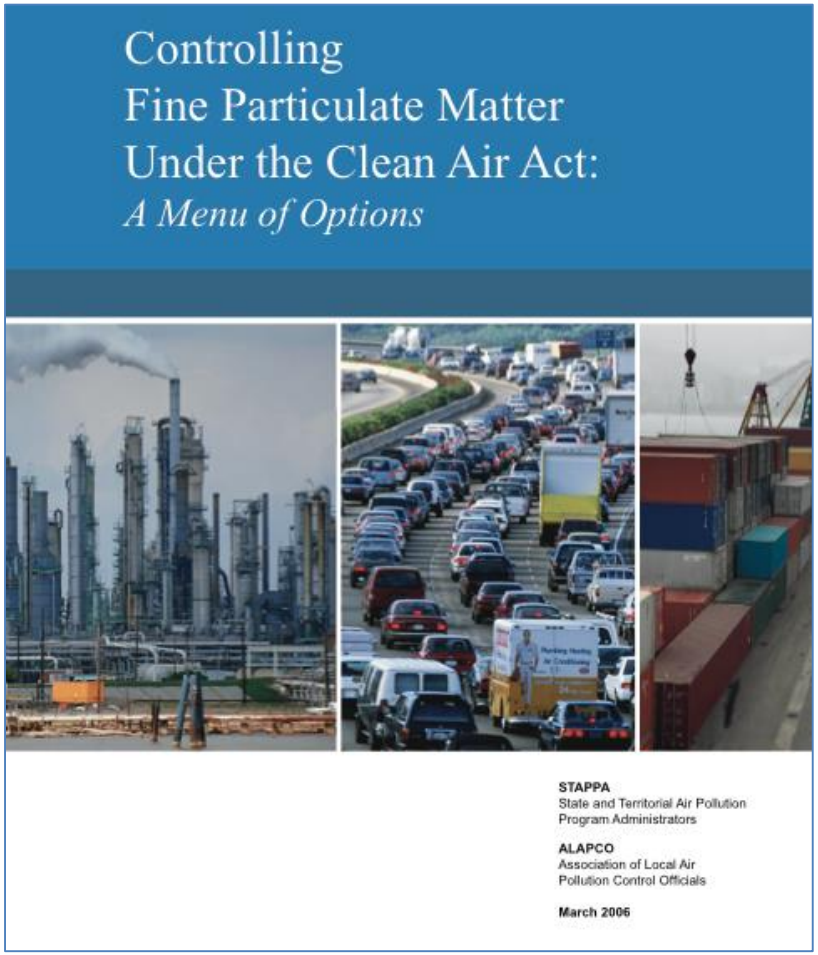
Montpelier, VT 05602
Phone: 802-223-8199
www.raponline.org

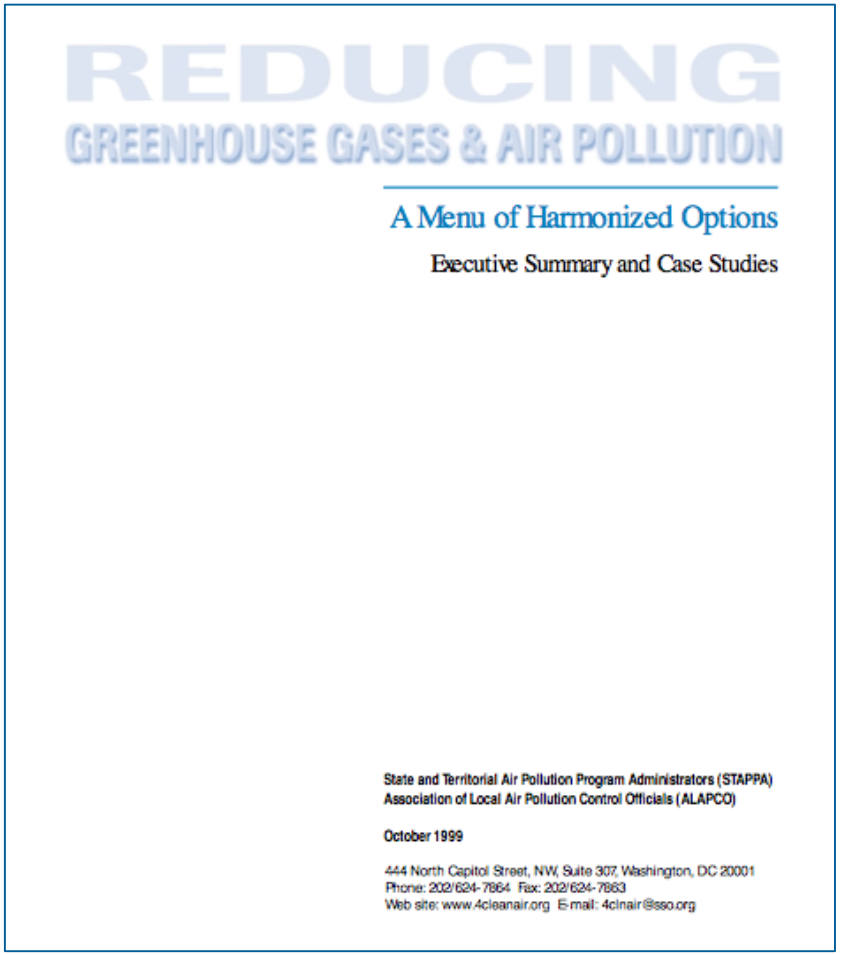
Introduction

- The Regulatory Assistance Project (RAP) is a global, non-profit team of energy experts, mostly veteran regulators, advising current regulators on the long-term economic and environmental sustainability of the power and natural gas sectors. (www.raponline.org)
  - *Foundation-funded; some contracts*
  - *Non-advocacy; no interventions*

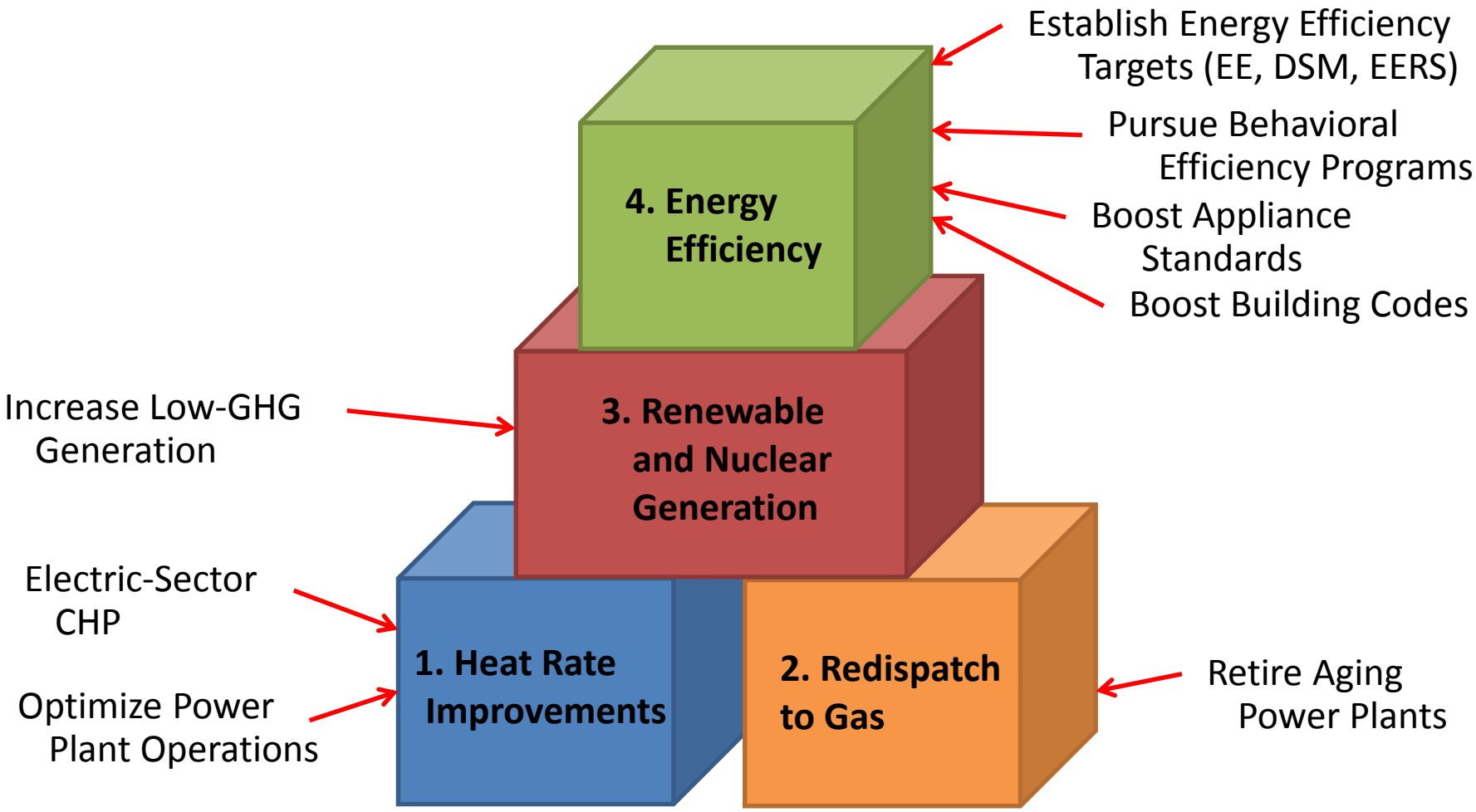
- Ken Colburn is a principal at RAP. His experience as an air quality regulator came as Air Director for the State of New Hampshire and as Executive Director of NESCAUM.

Latest in a Long Series of NACAA "Menus of Options"





EPA's Building Blocks

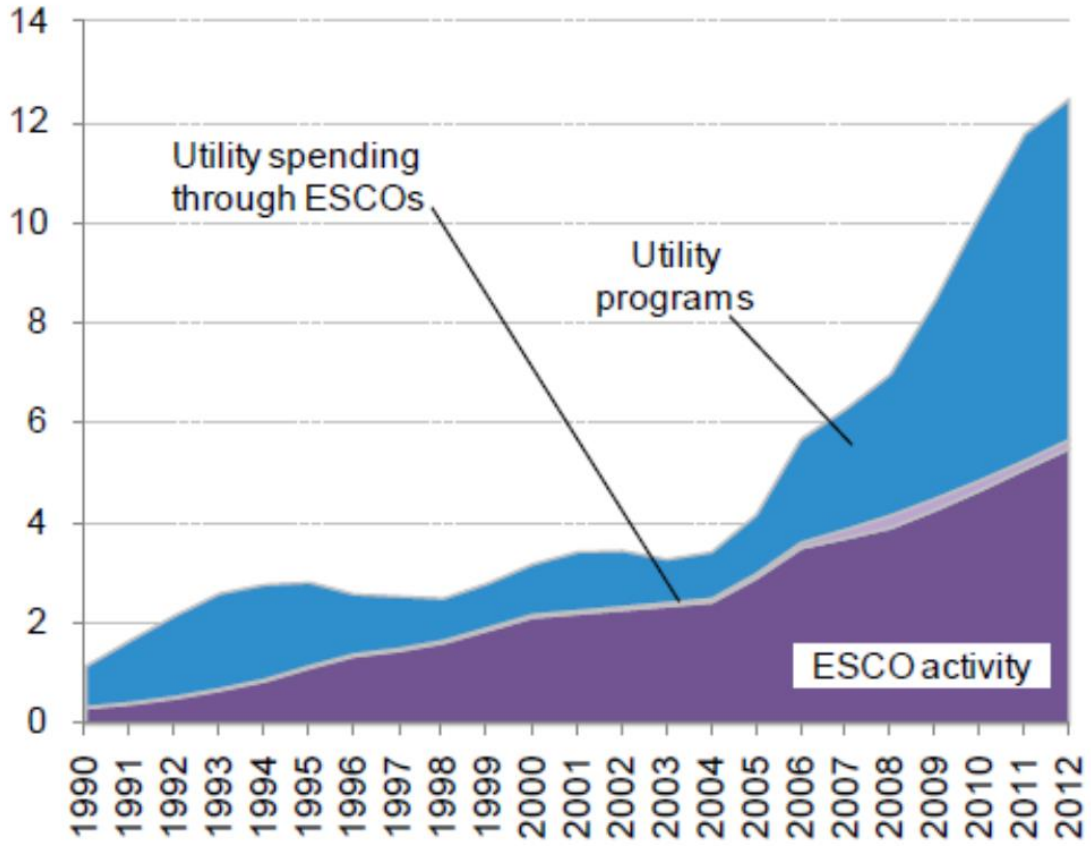


Many Other Technology & Policy Options Exist

- Optimize Grid Operations
- Reduce Losses in the T&D System
- Privately-delivered Energy Efficiency
- Encourage Clean Distributed Generation
- Revise Capacity Market Practices
- Adopt Environmental Dispatch
- Improve Utility Resource Planning
- Adopt Cap-and-Invest Programs (e.g., RGGI)
- Tax Carbon Dioxide Emissions
- Water Conservation

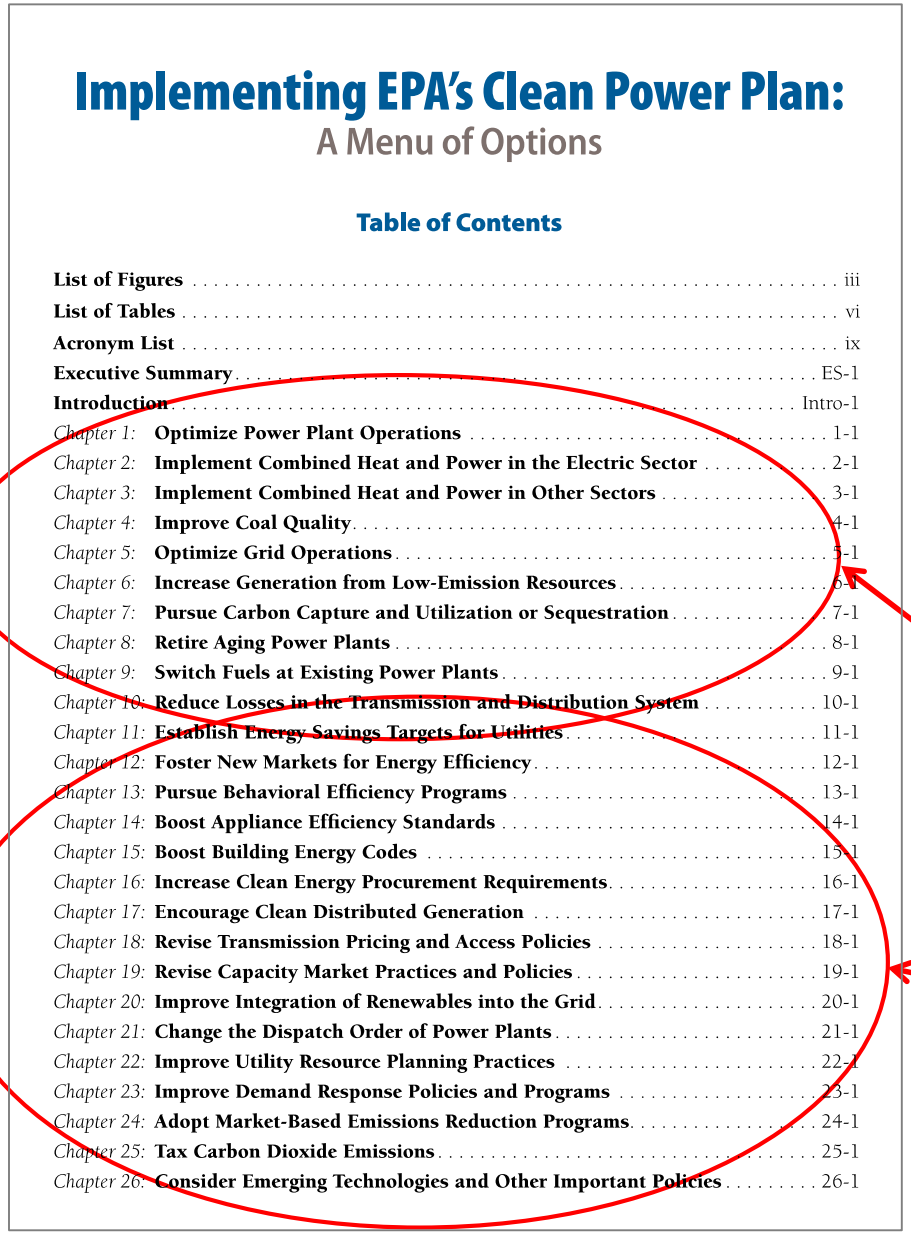
Privately-Delivered Energy Efficiency (ESCOs)

Investment in Energy Efficiency Through ESCOs and Utility Programs, 1993-2012



- Doesn't rely on state or utility investment
- ~$7B+ U.S. market investment annually
- Projected to grow to $10-15 billion by 2020
  - Scalable for 111(d)
- Included in your state's CPP plan?

Source: Bloomberg New Energy Finance, "Sustainable Energy in America Factbook"



Implementing EPA's Clean Power Plan:
A Menu of Options

Table of Contents

NACAA's *Menu of Options*

(Released May 21,2015)

465 pages; ~20 pp/chapter

10 Chapters on Technology Options

15 Chapters on Policy Options

www.4cleanair.org/NACAA_Menu_of_Options

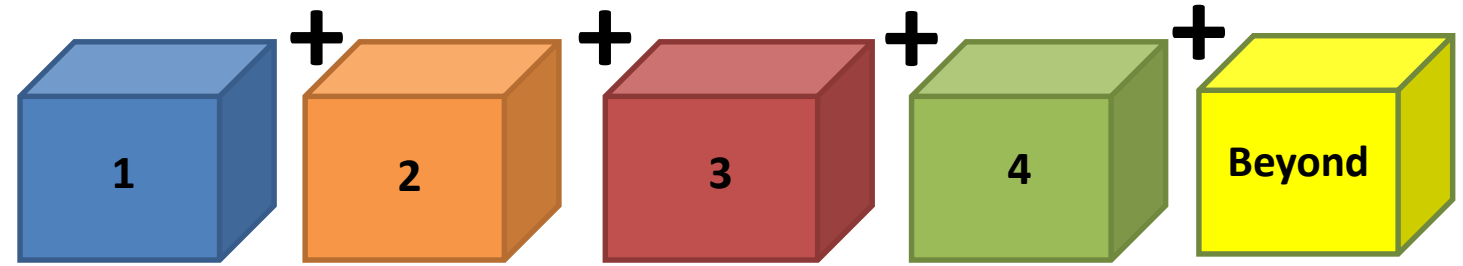
NACAA *Menu of Options*: Each Chapter Contents

- Profile (description, pros, cons, etc.)
- Regulatory Backdrop
- State & Local Implementation Experience
- GHG Emissions Reductions
- Co-Benefits
- Costs and Cost-Effectiveness
- Other Considerations
- For More Information
- Summary

State CPP Compliance Plans: The Actual Opportunity

~~Conventional Wisdom:~~ **Actual Opportunity:**

State Compliance = 1 + 2 + 3 + 4 + Beyond



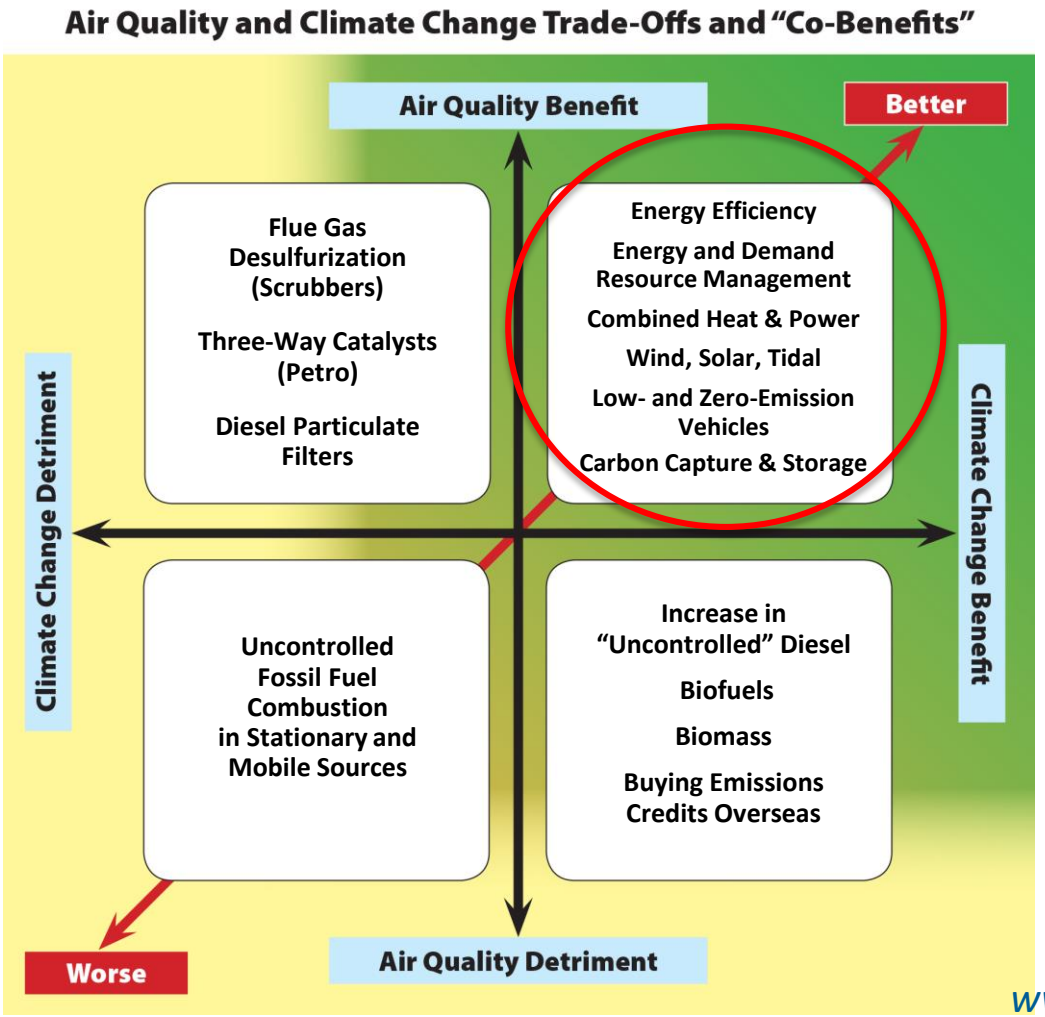
~~Each BB likely > 0~~

Some BBs *may* be 0…

Think "outside the blocks":

- EPA can't promote "Beyond BB" options…
- "Better to seek 'approval' than to ask permission"
- If you don't focus on least-cost, who will?

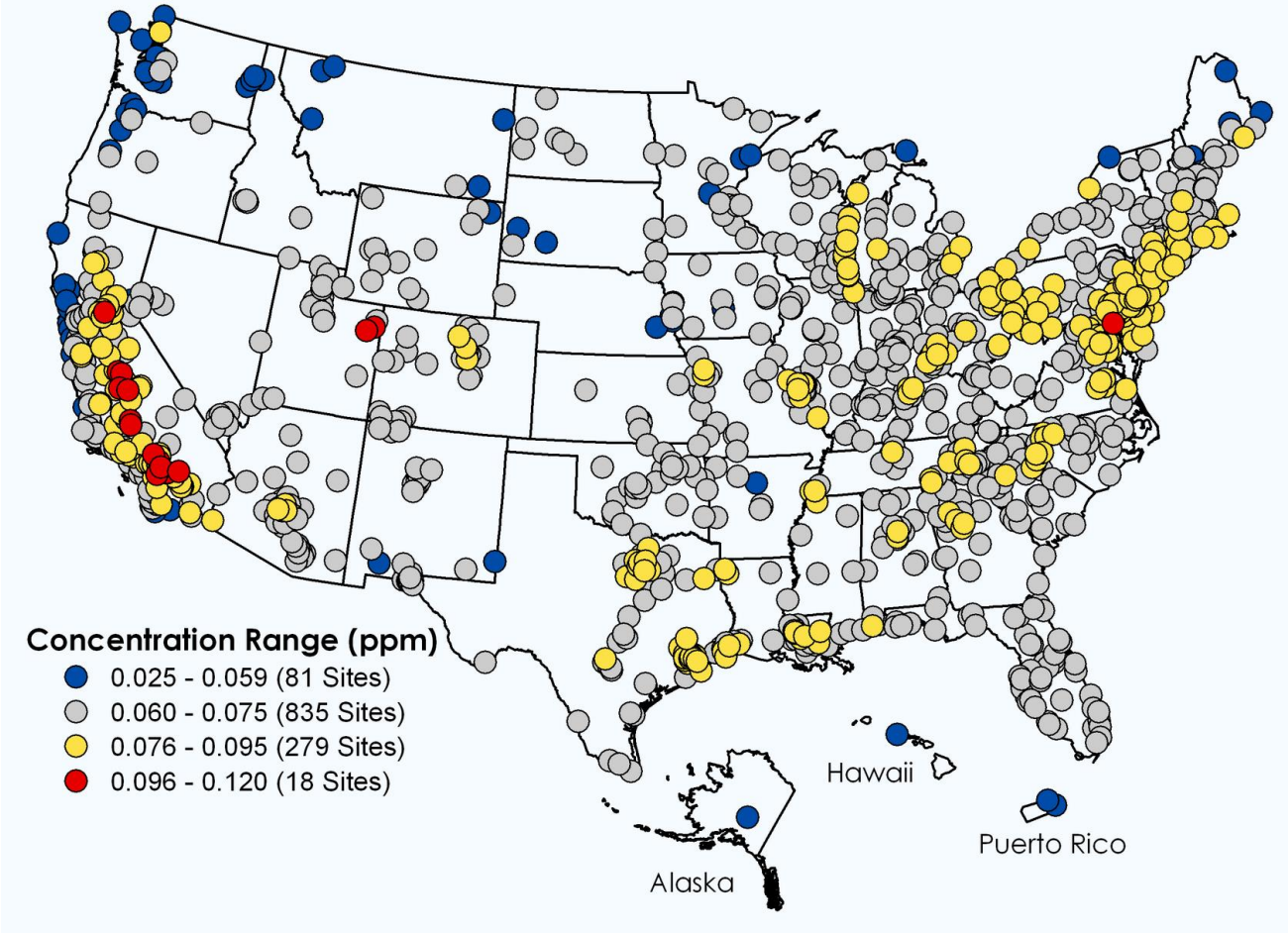
Important: Consider Co-Benefits



- Good 111(d) choices can help air quality; good air quality choices can help 111(d) compliance
- Ditto for increasing ***water*** concerns
- Integrated multi-pollutant, multi-media approach can lower cost, risk (IMPEAQ)

www.raponline.org/document/download/id/6440

More Stringent Ozone Standards Coming?(EPA, Ozone Concentrations, 2010)



EPA Clean Air Science Advisory Committee (CASAC) is considering 60-70 ppb range for new NAAQS

The Biggest Challenges?

- Many compliance options can't be implemented state-by-state; regional approach required
  - Transmission, grid optimization, integration, dispatch, capacity markets, etc.
- EPA's never done this before either…
- *Morphing the practice of air regulation into the new permissiveness reflected in EPA's proposed rule may be more difficult (for both EPA offices and the states) than it is for the regulated community to actually comply with the rule…*

Key Take-Aways

- Recognize that § 111(d) is *not* a traditional SIP
- Think "outside the blocks" to NACAA's 26 options
- Think regional (multi-state)
- Think least-cost, least-risk
  - Changing industry raises specter of stranded-costs
- Think integrated (ozone/particulates, water, & risk co-benefits)
- "Ask not what EPA wants your state's plan to be; ask what ***you*** want it to be"

Thank You for Your Time and Attention

About RAP

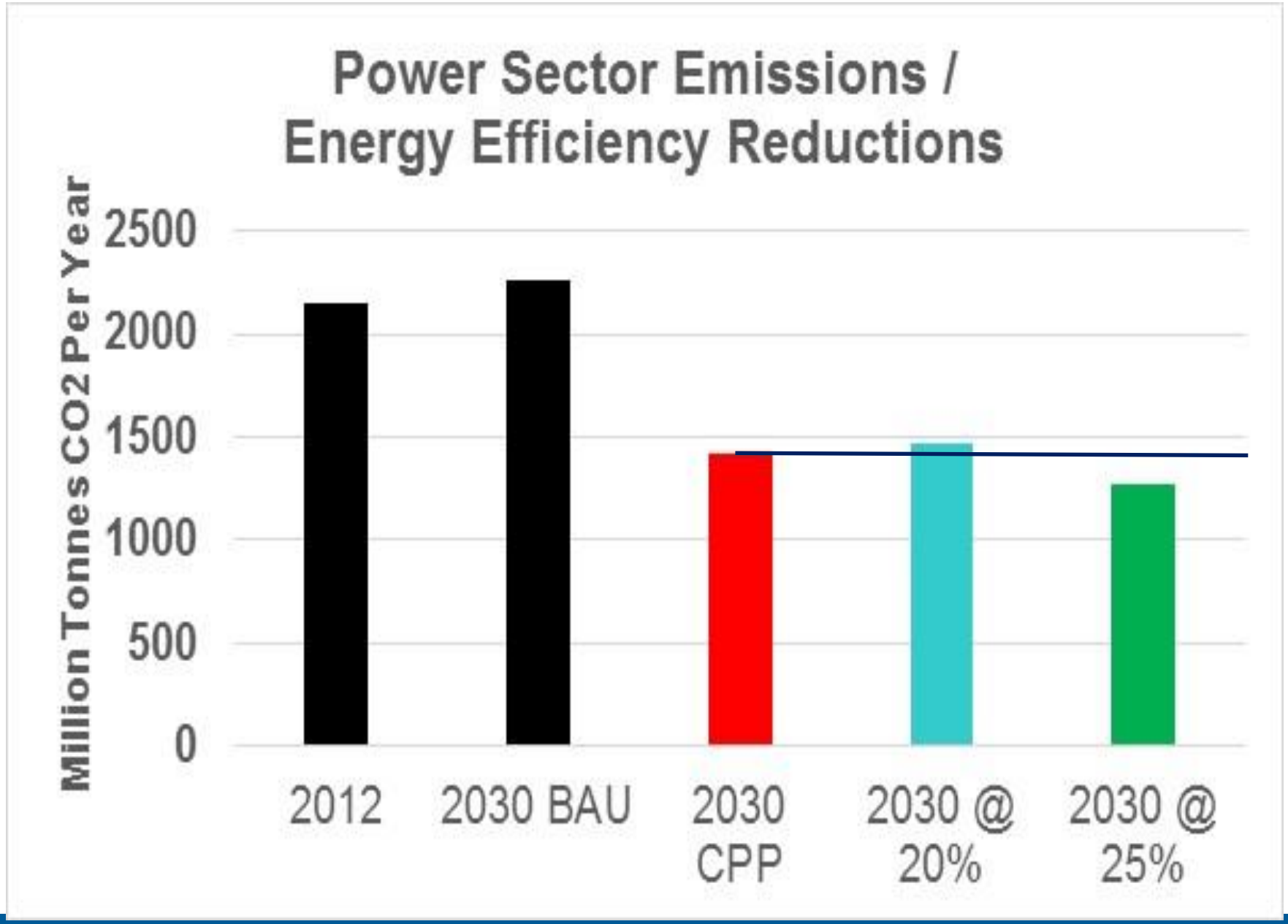
The Regulatory Assistance Project (RAP) is a global, non-profit team of experts focused on the long-term economic and environmental sustainability of the power and natural gas sectors. RAP has deep expertise in regulatory and market policies to:

- Promote economic efficiency
- Protect the environment
- Ensure system reliability
- Allocate system benefits fairly among all consumers

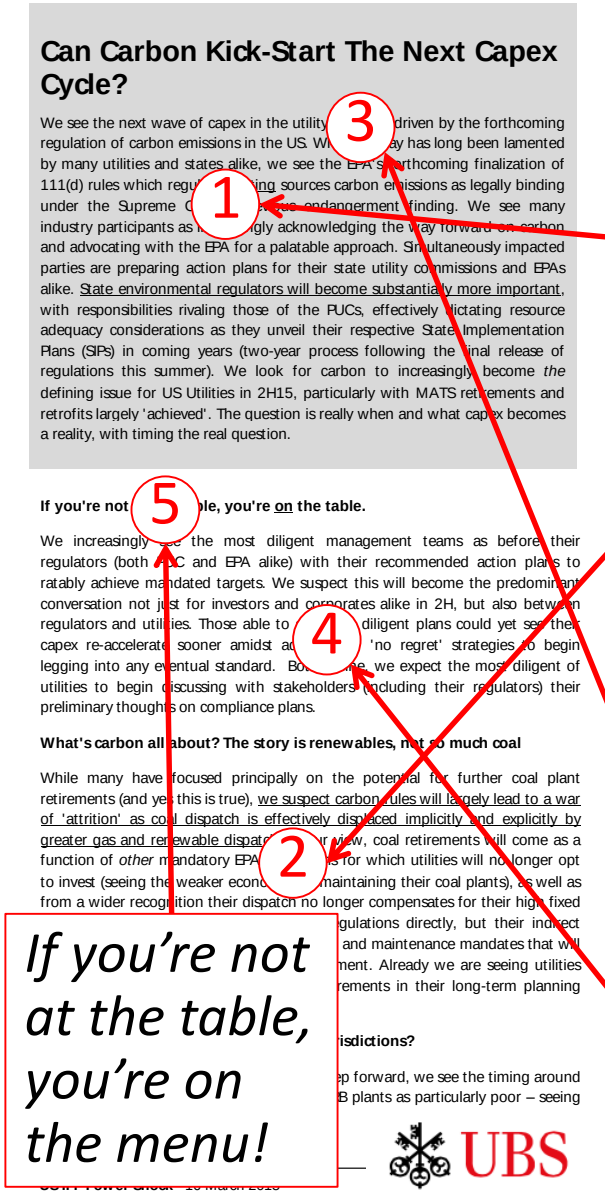
Learn more about RAP at www.raponline.org

Ken Colburn: kcolburn@raponline.org
617-784-6975

Additional Slides


Power Sector Emissions / Energy Efficiency Reductions
Million Tonnes CO2 Per Year
2500
2000
1500
1000
500
0
2012
2030 BAU
2030 CPP
2030 @ 20%
2030 @ 25%

What the Markets Are Saying



Can Carbon Kick-Start The Next Capex Cycle?

We see the next wave of capex in the utility [illegible] driven by the forthcoming regulation of carbon emissions in the US. Wh[illegible]ay has long been lamented by many utilities and states alike, we see the EPA's forthcoming finalization of 111(d) rules which regu[illegible]ing sources carbon emissions as legally binding under the Supreme C[illegible] endangerment finding. We see many industry participants as [illegible]gly acknowledging the way forward on carbon and advocating with the EPA for a palatable approach. Simultaneously impacted parties are preparing action plans for their state utility commissions and EPAs alike. State environmental regulators will become substantially more important, with responsibilities rivaling those of the PUCs, effectively dictating resource adequacy considerations as they unveil their respective State Implementation Plans (SIPs) in coming years (two-year process following the final release of regulations this summer). We look for carbon to increasingly become *the* defining issue for US Utilities in 2H15, particularly with MATS retirements and retrofits largely 'achieved'. The question is really when and what capex becomes a reality, with timing the real question.

If you're not [illegible]ble, you're on the table.

We increasingly see the most diligent management teams as before their regulators (both PUC and EPA alike) with their recommended action plans to ratably achieve mandated targets. We suspect this will become the predominant conversation not just for investors and corporates alike in 2H, but also between regulators and utilities. Those able to [illegible] diligent plans could yet see their capex re-accelerate sooner amidst ac[illegible] 'no regret' strategies to begin legging into any eventual standard. Bo[illegible]ne, we expect the most diligent of utilities to begin discussing with stakeholders (including their regulators) their preliminary thoughts on compliance plans.

What's carbon all about? The story is renewables, not so much coal

While many have focused principally on the potential for further coal plant retirements (and yes this is true), we suspect carbon rules will largely lead to a war of 'attrition' as coal dispatch is effectively displaced implicitly and explicitly by greater gas and renewable dispat[illegible]r view, coal retirements will come as a function of *other* mandatory EPA [illegible]s for which utilities will no longer opt to invest (seeing the weaker econo[illegible]maintaining their coal plants), as well as from a wider recognition their dispatch no longer compensates for their high fixed [illegible]gulations directly, but their indirect [illegible] and maintenance mandates that will [illegible]ment. Already we are seeing utilities [illegible]rements in their long-term planning

[illegible]isdictions?

[illegible]p forward, we see the timing around [illegible]B plants as particularly poor – seeing

UBS

If you're not at the table, you're on the menu!

Long lamented by many utilities and states, we see EPA's CPP rule as legally binding under *Mass. vs. EPA*

Coal retirements will come from other EPA regs, dispatch not compensating for high fixed costs, and less investment due to weaker economics – not the CPP directly

We see the next wave of utility capex as driven by regulation of carbon emissions in the US

Diligent management teams that get in front of their regulators (PUC & DEP) with articulate plans to achieve GHG targets could see their capex accelerate sooner

Best Practices in Clean Power Plan Planning

NASEO/ACEEE Webinar

Clean Power Plan: Tools for States

June 29, 2015

Rachel Wilson

 |

Synapse Energy Economics

- Founded in 1996 by CEO Bruce Biewald
- Leader for public interest and government clients in providing rigorous analysis of the electric power sector
- Staff of 30 includes experts in energy and environmental economics and environmental compliance

“Moments” in the Clean Power Plan

Key steps for developing Clean Power Plan compliance plans

Step 1 *Identify and engage key agencies and stakeholders: regulators, energy offices, utilities commissions, grid planners, consumer advocates, and others.*

Step 2 *Establish planning objectives and criteria for evaluating plans at the outset, and reference them throughout the planning process.*

Step 3 *Assess current and future system conditions: characteristics of the generation fleet, potential compliance strategies, and modeling input assumptions.*

Step 4 *Formulate a range of potential compliance plans.*

Step 5 *Identify key uncertainties with compliance outcomes and test plans under scenario and sensitivity analysis.*

Key agencies and stakeholders

- State environmental regulators
- State energy offices
- Public Utilities Commissions (PUCs)
- Regional transmission organizations (RTOs)/Independent System Operators (ISOs)
- Utilities
- Consumer advocates
- Other stakeholders

Criteria for strategies

1. All states must contain enforceable measures that reduce CO_2 emissions from affected sources.
2. Enforceable measures must be projected to achieve the equivalent or better than the 2030 emission targets set by EPA.
3. CO_2 emission performance from affected sources must be quantifiable and verifiable.
4. The state plan must include a process for:
   (a) state reporting of plan implementation at the level of the affected entity,
   (b) state-wide CO_2 emission performance outcomes, and
   (c) implementation of corrective measures if the initial measures fail to achieve the expected reductions.

Plan components

1. Identification of affected entities
2. Description of plan approach and geographic scope
3. Identification of state emission performance level (rate vs. mass)
4. Demonstration that the plan is projected to achieve the state's emission performance level
5. Milestones
6. Corrective measures
7. Identification of emission standards and any other measures
8. Demonstration that each standard is quantifiable, non-duplicative, permanent, verifiable, and enforceable
9. Identification of monitoring, reporting, and recordkeeping requirements
10. Description of state reporting
11. Certification of state plan hearing
12. Supporting material

Potential compliance strategies

	Supply Side	Demand Side
Building Blocks	• Heat rate improvements at coal plants • Increased dispatch of NGCC units • Nuclear and renewable energy	• Energy efficiency
Alternative Measures	• Heat rate improvements at non-coal fossil plants • Carbon capture and storage • Fuel switching • Co-firing with biomass • Integrated renewable technology • New natural gas capacity • Credits from new plant over-compliance • Increased utilization of NGCCs • Plant retirements	• Transmission and distribution efficiency • Distributed energy storage • Distributed generation • Combined heat and power • Alternative forms of energy efficiency • Smart grid innovations • Demand response

Characterizing the current and future Electric System

- Generator longevity
- Utilization rates relative to nameplate capacity
- Ramping abilities
- Emission rates and installed environmental controls
- Variable operating costs
- Purchase Power Agreements
- Transmission constraints
- Effectiveness of existing energy efficiency programs
- Current levels of distributed generation

Model input assumptions

1. Sales and peak load
2. Fuel prices
3. Capital costs of generation, transmission and distribution equipment
4. Technology performance characteristics
5. Renewable energy potential
6. Energy efficiency potential and program cost
7. Avoided cost of generation
8. Resource availability and constraints
9. Transmission upgrades or constraints
10. Lead times for permitting and construction
11. Future regulations
12. Resource adequacy and reliability

Modeling compliance scenarios

	Screening tools	Integrated models	Simulation dispatch	Capacity expansion
Clean Power Plan Planning Tool (CP3T)	X			
National Energy Modeling System (NEMS)		X		
Integrated Planning Model (IPM)		X		
PROMOD IV			X	
Market Analytics			X	
MIDAS			X	
ReEDS			X	X
AuroraXMP			X	X
EGEAS				X
Strategist				X
System Optimizer				X

Key questions in the planning process

1. Mass- or rate-basis	Will my state pursue a mass-based or rate-based compliance target? Why is this form of target the best choice?
2. Solo, trading, or joint	Will my state choose solo compliance, compliance with interstate trading, or multi-state joint compliance? Which type of compliance planning offers the most benefits for my state?
3. Correct specifications	Has my region's electric system been characterized properly?
4. Measure availability	Which of EPA's building blocks are available as compliance options in my state? Are alternative compliance options available? Which options might be categorized as least-cost?
5. Forecasting assumptions	Are the electric sector forecasts and assumptions up-to-date? Do sound forecasting methodologies underlie the assumptions? Were the forecasts done by reputable third parties?
6. Transparency	Is the electric sector modeling process transparent? What scenarios and sensitivity variables are being examined?
7. Realistic constraints	Are any model constraints realistic?
8. Supply-side resources	Do electric sector models treat supply- and demand- side resources on equal footing?
9. Evaluation criteria	What are the criteria used to evaluate potential compliance plans?
10. Ratepayer interests	Are ratepayer interests adequately represented in the final compliance plan?

Full report available at:

http://www.synapse-energy.com/sites/default/files/NASUCA-Best-Practices-Report-15-025.pdf

Contact us:

Rachel Wilson: rwilson@synapse-energy.com

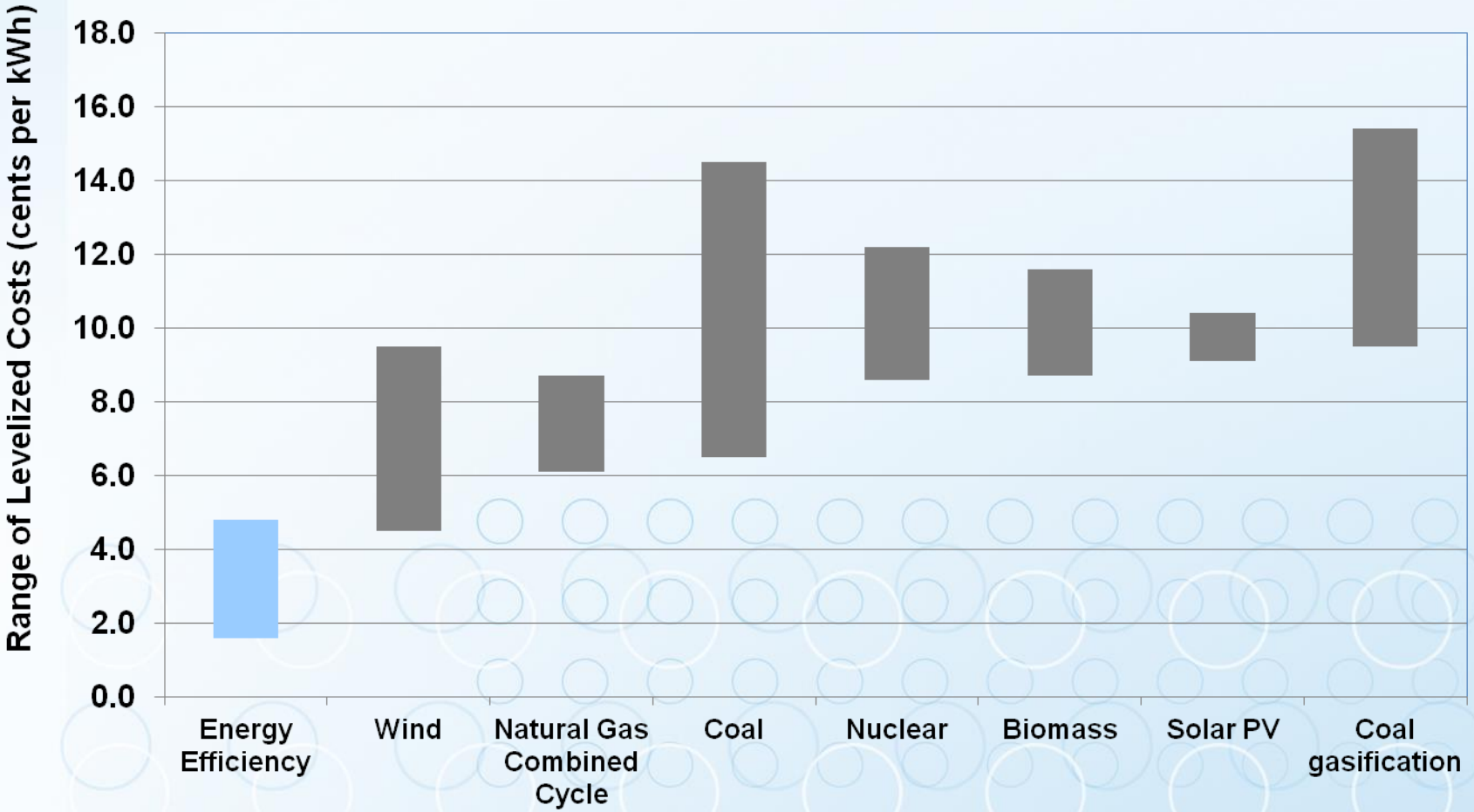
American Council for an Energy-Efficient Economy

Clean Power Plan Tools for States

Sara Hayes, ACEEE

June 29, 2015

Comparing the costs of some compliance options



Source: Energy efficiency program portfolio data from Molina 2014; All other data from Lazard 2013.

ACEEE
American Council for an Energy-Efficient Economy

Our Goal:

To remove barriers to EE as a compliance mechanism by providing information.

Tools

1. SUPR calculator – Quantify opportunity
2. Template series – Document programs/policies in plans

Purpose of SUPR

WHAT IT DOES: The State and Utility Pollution Reduction (SUPR) calculator can assist states in understanding the cost and pollution reduction potential of different compliance options

WHO IT'S FOR: Policymakers, state governments, utility operators, and other stakeholders weighing options to comply with EPA's Clean Power Plan

How it Works

- User can pick from 19 different policies and technologies to build a “compliance scenario”
- Results are for 2016–2030
- State specific results for:
  - NO_x SO_2 and CO_2 reductions
  - Energy savings
  - Costs

Energy Efficiency Options

Annual 1.5% energy savings target. A statewide energy efficiency savings goal of 1.5% electricity savings per year through 2030.

Annual 1% energy savings target. A statewide energy efficiency savings goal of 1% electricity savings per year through 2030.

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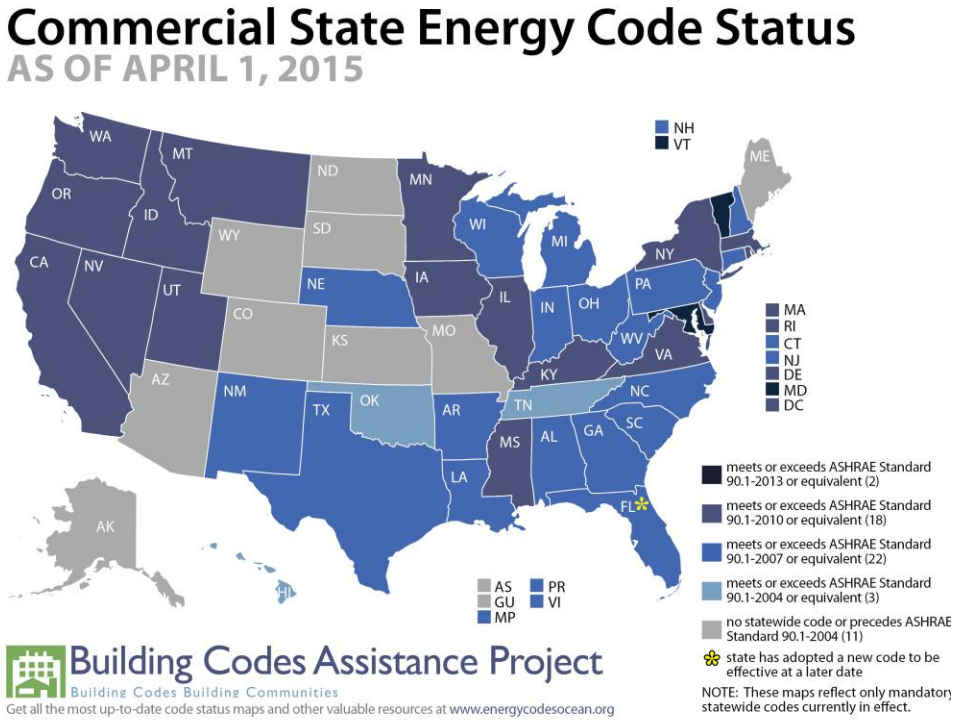
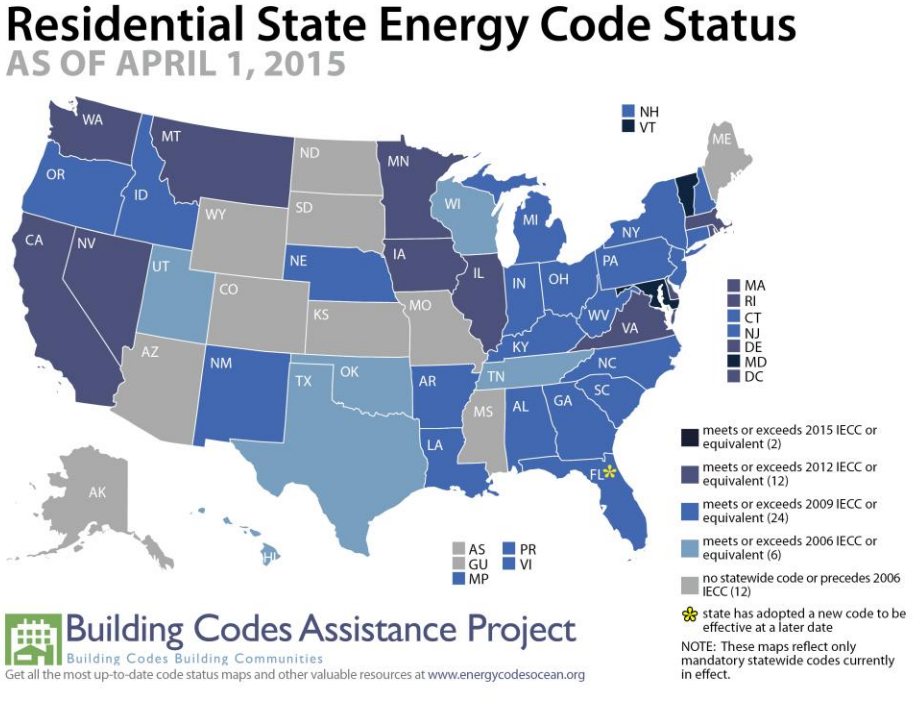
Energy efficiency options

Building energy codes (low). Reflects state adoption of codes equivalent to the 2015 IECC for homes and ASHRAE Standard 90.1-2013 for commercial buildings

Building energy codes (high). Reflects the adoption of the national models as they are updated on three-year cycles.

This option also assumes better compliance rates.





Energy efficiency options

Behavior programs. Residential feedback program that saves 2% per year from participants. Assumes a 50% participation rate.

Energy service company (ESCO) programs. Energy performance contracts are put in place based on historic ESCO market growth trends (8.3% annually).

Combined heat and power options

Combined heat and power (low). A total of 40 megawatts (MW) of CHP are installed evenly between the commercial and industrial sector.

Combined heat and power (medium). 100 MW of CHP

Combined heat and power (high). 500 MW of CHP

Renewable options

Onshore wind power (low). Construction and operation of 100 MW of onshore wind power operating at 30% capacity factor.

Onshore wind power (high). Construction and operation of 500 MW of onshore wind power operating at 30% capacity factor.

Renewable options

Rooftop photovoltaic (PV) solar power. Construction and operation of 100 MW of distributed rooftop solar PV at 23% capacity factor.

Utility scale PV solar power (low). Construction and operation of 100 MW of solar PV at 25% capacity factor.

Utility scale PV solar power (high). Construction and operation of 500 MW of solar PV at 25% capacity factor

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Nuclear option

Nuclear power. Construction and operation of a 1,000 MW nuclear power plant operating at 85% capacity factor.

Pollution control options

Fuel switching from coal to natural gas. A retrofit of an existing coal-fired power plant to burn natural gas.

Selective catalytic reduction. Installation of an emissions control technology used to reduce emissions of NO_x from an uncontrolled facility by 90%.

Pollution control options

Flue-gas desulfurization. Installation of an emissions control technology used to reduce emissions of SO_2 from an uncontrolled plant by 95%.

Carbon sequestration. Installation of a post-combustion carbon dioxide (CO2) capture and storage technology that reduces CO2 emissions by 90%.

Microsoft Excel - SUPR Beta_111d Blog Illinois [Read-Only]

File Edit View Insert Format Tools Data Window Help

Type a question for help

U5

State selected Illinois

Step 4

Detailed results →

Selected measures

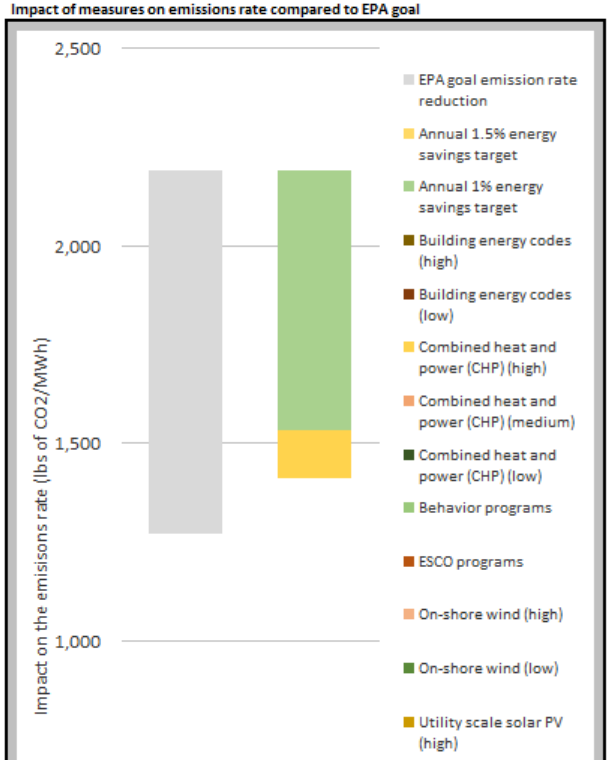
1.	Combined heat and power (CHP) (high)
2.	Combined heat and power (CHP) (high)
3.	Combined heat and power (CHP) (high)
4.	Combined heat and power (CHP) (high)
5.	Combined heat and power (CHP) (high)
6.	Annual 1% energy savings target
7.	Annual 1% energy savings target
8.	-
9.	-
10.	-

Summary results

	2020	2025	2030
Cumulative NO_x reductions (tons)	74,400	197,200	360,700
Cumulative SO_2 reductions (tons)	326,300	838,700	1,509,800
Cumulative CO_2 reductions (tons)	107,916,000	297,756,000	557,753,000
Annual CO_2 reductions (tons)	97,547,000	274,426,000	521,462,000
Cummulative net cost (million 2011$)	1,158	(1,392)	(9,708)
Cumulative energy saved (MWh)	47,485,200	186,198,900	405,007,400
Annual energy saved (MWh)	16,842,000	34,639,000	48,632,000

* Results are for all selected measures combined reported cumulatively.

Impact of measures on emissions rate compared to EPA goal



What does this mean?

Number of 100 MW power plants offset by 2030	695
Savings from energy efficiency measures by 2030 (million 2011$)	$37,454
Percent of EPA's goal achieved by selected measures	85%

Helpful definitions:

Annual savings: the savings in a given year from all the measures that have been installed under a policy or program in prior years and in that year that are still saving energy (and CO2, NOx and SOx).

Cumulative savings: all the savings under a policy or program up through a given year, the sum of annual savings through that year.

Cumulative cost: all the spending on a policy or program up through a given year, the sum of all of the money spent through that year.

Cumulative net cost: all of the spending on a policy or program up through a given year minus all of the avoided spending through that same year. The spending on the program minus any avoided spending from lower energy consumption/lower energy bills.

Start | Results | Detailed Results | Visual Results

Calculate

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ACEEE American Council for an Energy-Efficient Economy

Microsoft Excel - SUPR Beta_111d Blog Illinois [Read-Only]

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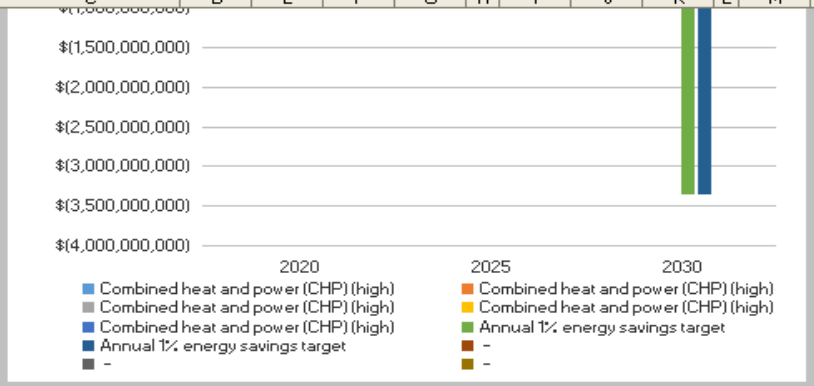

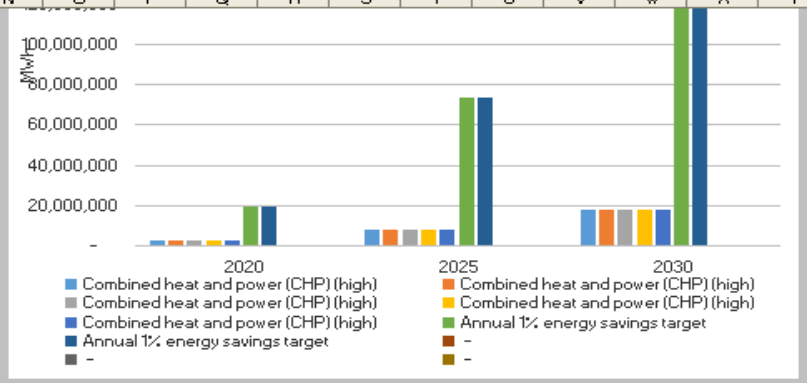

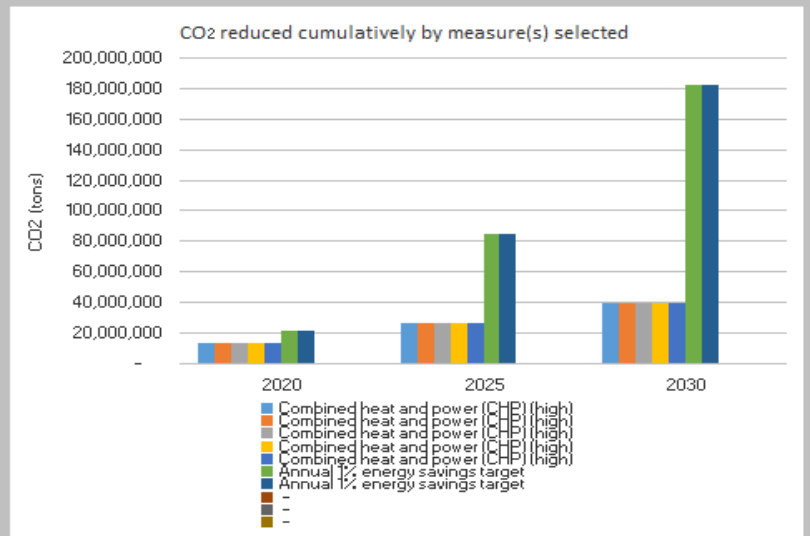

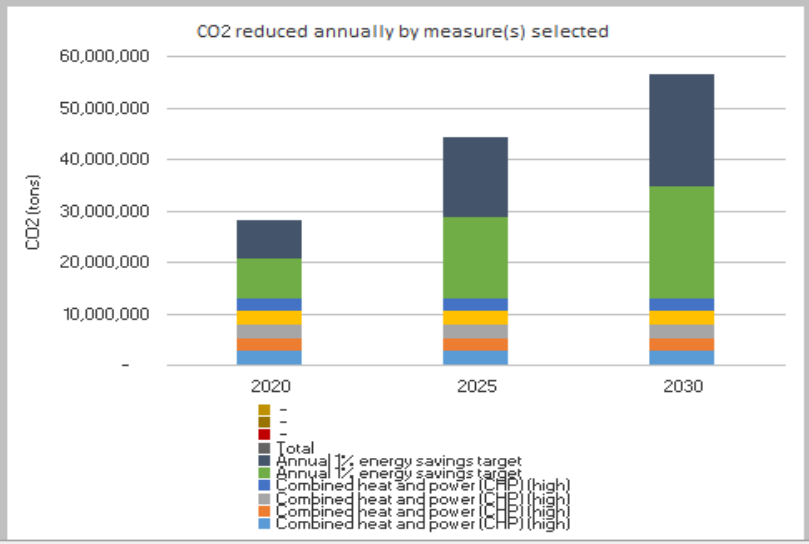

Start Results Detailed Results **Visual Results**

Calculate

Template Series

We looked at existing EPA guidance, the proposed rule, experience with EE and approved state SIPs

Templates are our *best guess* as to how various EE policies or programs might be documented in a state compliance plan

An Example: EPA's 4 Evaluation Criteria

1. **Enforceable** measures that reduce power plant CO2 emissions
2. **Projected achievement of emission performance equivalent** to EPA goal, on a timeline equivalent to that in emission guidelines
3. **Quantifiable and verifiable** emission reductions
4. **Process for reporting** on plan progress toward achieving CO2 goals and implementation of corrective actions, if necessary

Compliance Templates

Each one includes:

- Background/overview of key elements
- A list of the elements that should likely be addressed
- Instructions for how a state might address each element
- A hypothetical submission/case study

Topics include:

- Building codes - http://aceee.org/white-paper/111d-building-codes-template
- Financing programs - http://aceee.org/white-paper/cpp-financing-template
- Combined heat and power – http://aceee.org/white-paper/cpp-chp
- Energy savings target - forthcoming
- Multifamily programs – forthcoming

Questions

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Downloadable version of SUPR:
http://aceee.org/research-report/e1501

Other helpful resources including templates:
http://aceee.org/topics/section-111d-clean-air-act

National Association of State Energy Officials

Webinar on the Clean Power Plan – Tools for States

NASEO Update

June 29, 2015

About NASEO and State Energy Offices

- **NASEO represents the 56 governor-designated energy offices from each state and territory. *State Energy Directors*:**
  - Advise governors, legislatures, and regulators
  - Advance practical energy policies and support energy technology research, demonstration, and deployment
  - Partner with the private sector to accelerate energy-related economic development and enhance environmental quality
  - Engage in the development of state energy policies and the oversight of billions of dollars in state-based energy funding
  - Lead state energy policy planning in most states

NASEO's Affiliates

A robust and engaged network of +60 private-sector partners, including representatives from business, trade associations, nonprofit organizations, educational institutions, laboratories, and government.

NASEO CPP Approach

- NASEO has not taken a position on 111(d)
- Support inter- and intra-state energy office, air agency, and utility commission discussions
- If CPP moves forward NASEO seeks to:
  - maintain electricity system reliability and affordability
  - ensure maximum compliance flexibility for states
  - enable least cost compliance (e.g., EE – supply and demand, distributed resources, voluntary actions)
- EPA should provide states the opportunity to use both:
  - state-overseen ratepayer efficiency programs ***and***
  - public and private non-ratepayer approaches (e.g., ESPC, Superior Energy Performance, CHP, building energy codes, ENERGY STAR, C-PACE, weatherization)

NASEO CPP Activities

- "3N" cooperation with the National Association of Clean Air Agencies (NACAA) and National Association of Regulatory Utility Commissioners (NARUC)
  - Consensus "Energy Efficiency Principles": http://www.naseo.org/Data/Sites/1/principles_3n_2014.pdf
    (e.g., reliability, national energy efficiency registry, credit for early action)
  - Efficiency Case Studies Meeting: December 2014
  - Efficiency Plan Language Meetings: March 2015
  - Engage states, utilities, energy industry, advocacy groups, federal agencies on reliability, cost and EE compliance (ongoing)
- *Incorporating Energy Efficiency and Renewable Energy Policies into Greenhouse Gas Compliance Plans* (M.J. Bradley, Feb. 2015)
  - EERS, RPS focused; with look at AZ, MN, PA
- State 111(d) Resource Hub: www.111d.naseo.org/ --with ACEEE

NASEO Ongoing/Upcoming CPP Activities

- Ongoing 3N cooperation with NACAA and NARUC
  - And others: NASUCA, NGA, ECOS…
- EE compliance case studies and plan language for state consideration
  - Work with stakeholder groups to focus on state plan aspects
  - Building energy codes, ESPC, CHP, industrial EE via Superior Energy Performance … others
  - To submit to NACAA and EPA
  - Support and encouraged resource development
- Advance voluntary national energy efficiency registry concept
  - Multi-state proposed work with the Climate Registry
- State Energy Program: VA-KY-GA on EM&V for performance contracting
- Promote multi-state and intra-state dialogue among State Energy Offices, air agencies, and utility commissions
  - Enhance support to State Energy Offices in plan input and analysis
  - NASEO's and others' regional and national meetings
  - Plan greater engagement with EPA regional offices
  - Other coordination, collaboration

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